

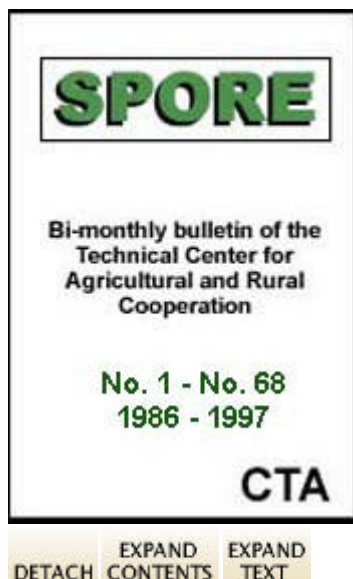
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*(introductory text)*

Acknowledgements



Curds, and why



Biogas ignites interest in southern Mali



Pests and diseases: not just a national concern!



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Biogas ignites interest in southern Mali

For six years La Compagnie Malienne de Développement des Textiles (the textile development company of Mali) popularized the use of biogas in southern Mali. The installations were designed along the lines of a Chinese model and more than 60 are still functioning today. The success of the community level biogas enterprises depends on local organizing ability but further research is needed before domestic systems are introduced.

In southern Mali, as in many other places in Africa, traders plunder wood from the villages to satisfy the demand from town. Many organizations are therefore working at community level to find alternative sources of fuel in order to reduce the destruction of rural tree cover. The Training Unit of the Department of Rural Development of the CMDT (Le Service Formation du Département du Développement rural de la CMDT) has, since the beginning of the '80s, been trying to establish biogas production. An ideal opportunity presented itself when a new Technical Workshop was built at Sirakélé (Atelier Technologique, Siraké: ATS) a few kilometres from Koutiala. A Chinese engineer who had experience of biogas installations in the hotter regions of China was called in to provide technical assistance. He set up a system which consisted of a concrete reservoir, or digester, of 6 cubic metres capacity for holding cattle dung and water.

It was decided that the biogas digester should initially be promoted at community level, for example as a means of lighting the maternity clinic, the school room and, possibly, the mosque. The introduction of domestic biogas installations was to wait for phase two of the project. From 1984 the CMDT began its experimental phase with 64 installations in the Koutiala region.

The ATS required the villages concerned to meet certain criteria so as to guarantee the effective management of the biogas plant. They had to propose two literate people who could be taught about biogas; they had to supply labour and materials for construction, and they had to guarantee to appoint a biogas supervisor who could be trained to supervise the construction of other installations. The CMDT, which gives credit for some of the construction materials, required that the villagers organize themselves into a community association (Association Villageoise) and thereby benefit from having a more structured management. Those responsible within the villages for the biogas are able to call on the assistance of the ATS during the first years of operation, particularly over problems that may arise over the management of biogas production.

A warm welcome **in** the villages

The people **of** the region were not familiar with this type **of** technology and so to gather their reactions the Training Unit **of** the CMDT set up a project with the support **of** the Association **of** Netherlands Development Assistance (SNV) to evaluate its impact. The project looked at a number **of** new technologies including biogas as well as improved beehives, millet mills and threshing machines and improved ploughs.

For biogas, as for the other new technologies, word **of** mouth proved to be an excellent means **of** spreading the word. People were curious to know how cow-dung could be used to produce energy. When the inhabitants **of** a village which already enjoyed the advantages **of** a biogas digester talked about their experiences at the market, their neighbours hurried to see for themselves. The blacksmith at Nankorola asked CMDT to install a digester because he had seen one at his community association. Information spread rapidly and effectively as a result **of** visits between villages.

Lighting is always given as the principal benefit **of** biogas. People know that they can also heat water and prepare meals with biogas but they rarely **use** it for those purposes and are even less likely to do so for running a fridge, a pump or a motor which require much more gas and also equipment which they cannot afford.

Community spirit

If a biogas installation is to function well it is important that the community association also works well. The need for light at the maternity clinic, or school room, must be recognized by the whole village. Where there is no sense **of** community cohesion within a village or there are other social or personality problems it is very difficult to encourage people to keep the biogas digester running. At N'Tosso, for example, the maternity clinic is closed and the biogas installation is not working. The villagers do not feel sufficiently motivated to feed the apparatus with manure. At Kian they have the same problem because the biogas specialist has not been paid.

Despite these difficulties it is clear that biogas is well adapted to the **rural** conditions **in** the region and people recognize that they can save on paraffin fuel for their lamps. However destabilised prices following devaluation **of** the CFA franc mean that it is impossible to estimate the direct profitability or savings **of** a biogas installation and more research is considered necessary before introducing biogas technology for domestic **use**. Although biogas energy helps to protect the environment, the implications **of** this are not yet fully understood by the **rural** people.



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